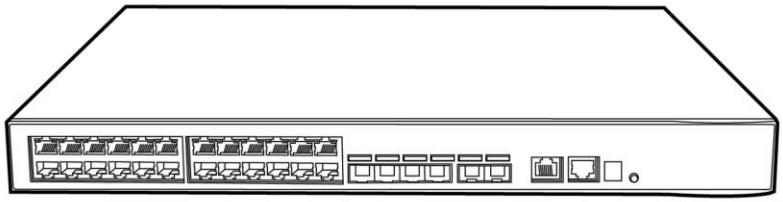
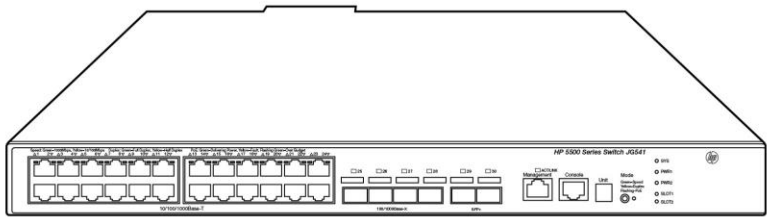
Overview

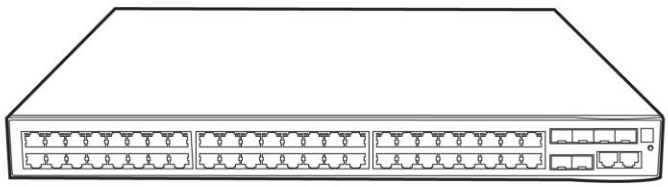
HP 5500 HI Switch Series



HP 5500-24G-4SFP HI Switch with 2 interface Slots

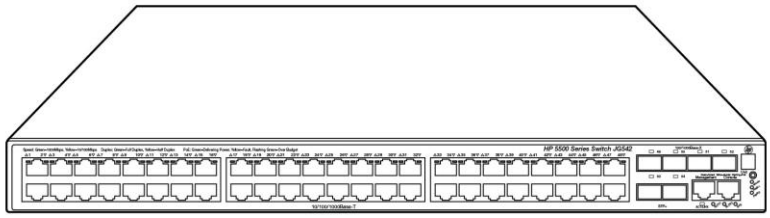


HP 5500-24G-PoE+-4SFP HI Switch with 2 Interface Slots

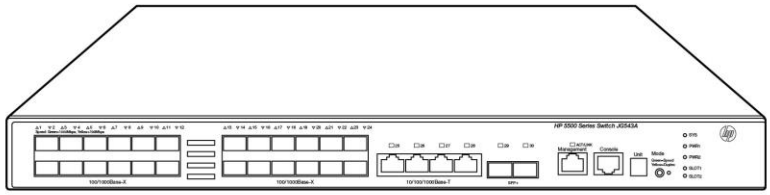


HP 5500-48G-4SFP HI Switch with 2 interface Slots

Overview



HP 5500-48G-PoE+-4SFP HI Switch with 2 Interface Slots



HP 5500-24G-SFP HI Switch with 2 Interface Slots

Models

HP 5500-24G-4SFP HI Switch with 2 Interface Slots	JG311A
HP 5500-48G-4SFP HI Switch with 2 Interface Slots	JG312A
HP 5500-24G-PoE+-4SFP HI Switch with 2 Interface Slots	JG541A
HP 5500-48G-PoE+-4SFP HI Switch with 2 Interface Slots	JG542A
HP 5500-24G-SFP HI Switch with 2 Interface Slots	JG543A

Key features

- High expandability for investment protection
- Premium resiliency and integrated management
- SDN readiness with OpenFlow support
- Full-featured IPv4/IPv6 dual stack
- 1440 W of PoE+ power using dual power supplies for high resiliency

Product overview

Overview

The HP 5500 HI Switch Series comprises Gigabit Ethernet switches that deliver outstanding resiliency, security, and multiservice support capabilities at the edge layer of data center, large campus, and metro Ethernet networks. The switches can also be used in the core layer of SMB networks.

With Intelligent Resilient Fabric (IRF) support and available dual power supplies, the HP 5500 HI Switch Series can deliver the highest levels of resiliency and manageability. In addition, the PoE+ models provide up to 1,440 W of PoE+ power with the dual power supply configuration.

Designed with two fixed 10GbE ports and extension module flexibility, these switches can provide up to six 10GbE uplink or 70 GbE ports. With complete IPv4/IPv6, OpenFlow, and MPLS/VPLS features, the series provides investment protection with an easy transition from IPv4 to IPv6 networks.

Features and benefits

Software-defined networking

- **OpenFlow**
  supports OpenFlow 1.3 specification to enable SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

Quality of Service (QoS)

- **Advanced classifier-based QoS**
  classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis
- **Traffic policing**
  supports Committed Access Rate (CAR) and line rate
- **Powerful QoS feature**
  creates traffic classes based on access control lists (ACLs), IEEE 802.1p precedence, IP, and DSCP or Type of Service (ToS) precedence; supports filter, redirect, mirror, or remark; supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted random early discard (WRED), weighted deficit round robin (WDRR), SP+WDRR, and SP+WFQ.
- **Storm restraint**
  allows limitation of broadcast, multicast, and unknown unicast traffic rate to reduce unwanted broadcast traffic on the network

Management

- **Friendly port names**
  allow assignment of descriptive names to ports
- **sFlow** (RFC 3176)
  provides scalable ASIC-based wirespeed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Complete session logging**
  provides detailed information for problem identification and resolution
- **Remote configuration and management**
  enables configuration and management through a secure Web browser or a CLI located on a remote device
- **Manager and operator privilege levels**
  provides read-only (operator) and read/write (manager) access on CLI and Web browser management interfaces
- **Management VLAN**
  segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP
- **Command authorization**
  leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail

Overview

documents activity

- **Secure web GUI**
  provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **SNMPv1, v2c, and v3**
  facilitate centralized discovery, monitoring, and secure management of networking devices
- **Remote monitoring (RMON)**
  uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- **Remote intelligent mirroring**
  mirrors ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port anywhere on the network
- **In-service software upgrade (ISSU)**
  enables operators to perform upgrades in the shortest possible amount of time with minimal risk to network operations or traffic disruptions

Connectivity

- **Auto-MDIX**
  provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **Packet storm protection**
  protects against broadcast, multicast, or unicast storms with user-defined thresholds
- **Ethernet operations, administration and maintenance (OAM)**
  detects data link layer problems that occurred in the "last mile" using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices
- **Flow control**
  provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- **Fixed 10GbE ports**
  provides two fixed SFP+ ports for a 20 GbE connection to the network without the need for additional extension interface modules
- **Optional 10GbE ports**
  deliver, through the use of optional modules, additional 10GbE connections, which are available for uplinks or high-bandwidth server connections; flexibly support copper, XFP, SFP+, or CX4 local connections
- **Optional 8-port SFP module**
  adds up to eight additional wirespeed Gigabit Ethernet ports for unprecedented Gigabit density in a single 1U enclosure
- **Jumbo packet support**
  supports up to 12288-byte frame size to improve the performance of large data transfers
- **High-bandwidth CX4 local stacking**
  achieves 12 Gbps per connection when using local CX4 stacking, allowing for up to 96 Gbps total stacking bandwidth (full duplex) in a resilient stacking configuration
- **IEEE 802.3at Power over Ethernet (PoE+)**
  provides up to 30 W per port that allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments

Performance

- **Hardware-based wirespeed access control lists (ACLs)**
  help provide high levels of security and ease of administration without impacting network performance with a feature-rich TCAM-based ACL implementation
- **Nonblocking architecture**
  delivers up to 224 Gb/s of wire-speed switching with a nonblocking switching fabric and up to 167 million pps throughput

Resiliency and high availability

Overview

- **Separate data and control paths**
  separates control from services and keeps service processing isolated; increases security and performance
- **Device Link Detection Protocol (DLDP)**
  monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks
- **Intelligent Resilient Framework (IRF)**
  creates virtual resilient switching fabrics, where two or more switches perform as a single L2 switch and L3 router; switches do not have to be co-located and can be part of a disaster-recovery system; servers or switches can be attached using standard LACP for automatic load balancing and high availability; can eliminate the need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation
- **Rapid Ring Protection Protocol (RRPP)**
  connects multiple switches in a high-performance ring using standard Ethernet technology; traffic can be rerouted around the ring in less than 50 ms, reducing the impact on traffic and applications
- **Smart link**
  allows 50 ms failover between links
- **Virtual Router Redundancy Protocol (VRRP)**
  allows groups of two routers to dynamically back each other up to create highly available routed environments

Manageability

- **Dual flash images**
  provides independent primary and secondary operating system files for backup while upgrading
- **Multiple configuration files**
  allow multiple configuration files to be stored to a flash image
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**
  facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **Troubleshooting**
  allows ingress and egress port monitoring enabling network problem solving; virtual cable tests provide visibility into cable problems
- **IPv6 management**
  future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, and ARPv6

Layer 2 switching

- **GARP VLAN Registration Protocol**
  allows automatic learning and dynamic assignment of VLANs
- **IP multicast snooping and data-driven IGMP**
  automatically prevents flooding of IP multicast traffic
- **Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) protocol snooping**
  controls and manages the flooding of multicast packets in a Layer 2 network
- **32K MAC addresses**
  provide access to many Layer 2 devices
- **IEEE 802.1ad QinQ and selective QinQ**
  increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **10GbE port aggregation**
  allows grouping of ports to increase overall data throughput to a remote device
- **Spanning Tree/MSTP, RSTP, and STP root guard**
  prevent network loops
- **32 MSTP instances**
  allow multiple configurations of STP per VLAN group

Overview

Layer 3 services

- **Loopback interface address**
  defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability
- **Address Resolution Protocol (ARP)**
  determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **Dynamic Host Configuration Protocol (DHCP)**
  simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets
- **User Datagram Protocol (UDP) helper function**
  allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP

Layer 3 routing

- **IPv4 routing protocols**
  support static routes, RIP, OSPF, ISIS, and BGP
- **IPv6 routing protocols**
  provide routing of IPv6 at wire speed; support static routes, RIPng, OSPFv3, IS-ISv6, and BGP4+ for IPv6
- **PIM-SSM, PIM-DM, and PIM-SM (for IPv4 and IPv6)**
  support IP Multicast address management and inhibition of DoS attacks
- **MPLS support**
  provides extended support of MPLS, including MPLS VPNs and MPLS Traffic Engineering (MPLS TE)
- **Virtual Private LAN Service (VPLS)**
  establishes point-to-multipoint Layer 2 VPNs across a provider network
- **Bidirectional Forwarding Detection (BFD)**
  enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, MPLS, and IRF
- **Policy-based routing**
  makes routing decisions based on policies set by the network administrator
- **Equal-Cost Multipath (ECMP)**
  enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- **IPv6 tunneling**
  allows a smooth transition from IPv4 to IPv6 by encapsulating IPv6 traffic over an existing IPv4 infrastructure

Security

- **Access control lists (ACLs)**
  provide IP Layer 2 to Layer 4 traffic filtering; support global ACL, VLAN ACL, port ACL, and IPv6 ACL; up to 6144 ingress ACLs and 1024 egress ACLs are supported
- **IEEE 802.1X**
  defines an industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
- **MAC-based authentication**
  authenticates the client with the RADIUS server based on the client's MAC address
- **Identity-driven security and access control**
  - **Per-user ACLs**
    permit or deny user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risking network security or providing unauthorized access to sensitive data
  - **Automatic VLAN assignment**

Overview

assigns users automatically to the appropriate VLAN based on their identities

- **Port security**
  allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Secure FTP**
  allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **STP BPDU port protection**
  blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **DHCP protection**
  blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **DHCP snooping**
  helps ensure that DHCP clients receive IP addresses from authorized DHCP servers and maintain a list of DHCP entries for trusted ports; prevents reception of fake IP addresses and reduces ARP attacks, improving security
- **DHCPv6 snooping**
  ensures that DHCPv6 clients obtain IPv6 addresses from authorized DHCPv6 servers and record IP-to-MAC mappings of DHCPv6 clients
- **Dynamic ARP protection**
  blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **STP root guard**
  protects the root bridge from malicious attacks or configuration mistakes
- **Guest VLAN**
  provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X
- **Port isolation**
  secures and adds privacy, and prevents malicious attackers from obtaining user information
- **IP source guard**
  helps prevent IP spoofing attacks
- **IPv6 source guard**
  help prevent IPv6 spoofing attacks using ND Snooping as well as DHCPv6 Snooping
- **ND Snooping**
  allows only packets with a legally obtained IPv6 address to pass
- **Endpoint Admission Defense (EAD)**
  provides security policies to users accessing a network
- **RADIUS/HWTACACS**
  eases switch management security administration by using a password authentication server
- **Secure management access**
  delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2 and SNMPv3
- **Unicast Reverse Path Forwarding (URPF)**
  allows normal packets to be forwarded correctly, but discards the attaching packet due to lack of reverse path route or incorrect inbound interface; prevents source spoofing and distributed attacks; supports distributed UFPF

Convergence

- **LLDP-MED (Media Endpoint Discovery)**
  defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **Internet Group Management Protocol (IGMP)**
  utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3
- **Multicast Source Discovery Protocol (MSDP)**
  allows multiple PIM-SM domains to interoperate; is used for inter-domain multicast applications
- **Multicast Border Gateway Protocol (MBGP)**
  allows multicast traffic to be forwarded across BGP networks and kept separate from unicast traffic
- **Multicast VLAN**
  allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, lessening network bandwidth demand by

Overview

reducing or eliminating multiple streams to each VLAN

- **LLDP-CDP compatibility**
  receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation

Additional information

- **Green initiative support**
  provides support for RoHS and WEEE regulations
- **Green IT and power**
  improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs

Warranty and support

- **Limited Lifetime Warranty v2.0**
  advance hardware replacement with next-business-day delivery (available in most countries). See www.hp.com/networking/warrantysummary for duration details.
- **Electronic and telephone support (for Limited Lifetime Warranty 2.0)**
  limited 24x7 telephone support is available from HP for the first 3 years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to www.hp.com/networking/warrantysummary
- **Software releases**
  to find software for your product, refer to www.hp.com/networking/support; for details on the software releases available with your product purchase, refer to www.hp.com/networking/warrantysummary

Configuration

Build To Order:

BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

Switch Chassis

HP 5500-24G-4SFP HI Switch with 2 interface Slots — JG311A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

HP 5500-24G-SFP HI Switch w/2 Intf Slt — JG543A

See Configuration Note:1, 2

- 4 RJ-45 autosensing 10/100/1000 ports
- 24 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=24 SFP Transceivers)
- 2 fixed SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 open module slots, or a combination
- Must select min 1 power supply
- 1U - Height

HP 5500-24G-PoE+-4SFP HI Switch w/2 Slt — JG541A

See Configuration Note:1, 2

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

HP 5500-48G-4SFP HI Switch with 2 interface Slots — JG312A

See Configuration Note:1, 2

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

HP 5500-48G-PoE+-4SFP HI Switch w/2 Slt — JG542A

See Configuration Note:1, 2

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

Configuration

Configuration Rules:

Note 1	The following Transceivers install into this Switch: (SFP Ports)	
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
Note 2	The following Transceivers install into this Switch: (SFP Ports)	
	HP X130 10G SFP+ LC SR Transceiver	JD092B
	HP X130 10G SFP+ LC LRM Transceiver	JD093B
	HP X130 10G SFP+ LC LR Transceiver	JD094B
	HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
	HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B

Box Level Integration CTO Models

CTO Solution Sku

HP 55xx CTO Switch Solution JG506A

- SSP trigger sku

CTO Switch Chassis

HP 5500-24G-4SFP HI Switch with 2 interface Slots JG311A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)

See Configuration Note:1, 2, 10

Configuration

- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

HP 5500-24G-SFP HI Switch w/2 Intf Slt — JG543A

- 4 RJ-45 autosensing 10/100/1000 ports
- 24 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=24 SFP Transceivers)
- 2 fixed SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 open module slots, or a combination
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-24G-PoE+-4SFP HI Switch w/2 Slt — JG541A

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-48G-4SFP HI Switch with 2 interface Slots — JG312A

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-48G-PoE+-4SFP HI Switch w/2 Slt — JG542A

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

Configuration Rules:

Note 1 The following Transceivers install into this Switch: (SFP Ports) (Use #0D1 quoted to switch if switch is CTO) - if applicable

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B

Configuration

	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
Note 2	The following Transceivers install into this Switch: (SFP Ports) (Use #0D1 quoted to switch if switch is CTO) - if applicable	
	HP X130 10G SFP+ LC SR Transceiver	JD092B
	HP X130 10G SFP+ LC LRM Transceiver	JD093B
	HP X130 10G SFP+ LC LR Transceiver	JD094B
	HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
	HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
Note 10	If the Switch Chassis is to be Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG506A - HP 55xx CTO Switch Solution. (Min 1/Max 1 Switch per SSP)	

Rack Level Integration CTO Models

Switch Chassis

HP 5500-24G-4SFP HI Switch with 2 interface Slots — JG311A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-24G-SFP HI Switch w/2 Intf Slt — JG543A

- 4 RJ-45 autosensing 10/100/1000 ports
- 24 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=24 SFP Transceivers)
- 2 fixed SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 open module slots, or a combination
- Must select min 1 power supply

See Configuration Note:1, 2, 10

Configuration

- 1U - Height

HP 5500-24G-PoE+-4SFP HI Switch w/2 Slt — JG541A

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-48G-4SFP HI Switch with 2 interface Slots — JG312A

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports(min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports(min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

HP 5500-48G-PoE+-4SFP HI Switch w/2 Slt — JG542A

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 SFP fixed Gigabit Ethernet SFP ports (min=0 \ max=4 SFP Transceivers)
- 2 SFP+ ports (min=0 \ max=2 SFP+ Transceivers)
- 2 port expansion module slots
- Must select min 1 power supply
- 1U - Height

See Configuration Note:1, 2, 10

Configuration Rules:

Note 1 The following Transceivers install into this Switch: (SFP Ports) (Use #0D1 quoted to switch if switch is CTO) - if applicable

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B

Note 2 The following Transceivers install into this Switch: (SFP+ Ports) (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable

Configuration

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B

Note 10 If HP CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #0D1) to the Rack.

Remarks: No Rail Kit required

Enter the following menu selections as integrated to the CTO Model X above if order is factory built.

Internal Power Supplies

System (std 0 // max 2) User Selection (min 1 // max 2) per switch enclosure

HP 5500 150WDC Power Supply — JD366A
See Configuration Note:1

HP 5500 150WAC Power Supply — JD362A
- includes 1 x c13, 150w

See Configuration Note:1, 2

PDU Cable NA/MEX/TW/JP — JD362A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JD362A#B2C
- C15 PDU Jumper Cord (ROW)

HP X362 720W AC PoE Power Supply — JG544A
- includes 1 x c13, 720w

See Configuration Note:2, 3, 4

PDU Cable NA/MEX/TW/JP — JG544A#B2B

Configuration

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JG544A#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JG544A#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP X362 1110W AC PoE Power Supply — JG545A
- includes 1 x c13, 1100w

See Configuration Note:2, 3, 4

PDU Cable NA/MEX/TW/JP — JG545A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JG545A#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JG545A#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 This power supply only supported on JG311x, JG312x, JG543x and JG681A Only.

Note 2 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.

Note 3 If #B2E is selected Then replace Localized option with #B2E for power supply and with #B2E for switch . (Offered only in AMS, Taiwan, and Japan)

Note 4 This power supply only supported on JG541x, JG542x, JG679A and JG680A Only.

Remarks: Drop down under power supply should offer the following options and results:
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

NOTE* DC Power Supply does not require Localization (CLIC Rule to not require looking for Localization)

Configuration

NOTE* Mixing of power supplies is supported

Modules

System (std 0 // max 2) User Selection (min 0 // max 2)

HP 5500 2-port 10GbE XFP Module — JD359B
- min=0 \ max=2 XFP Transceivers

See Configuration Note:2, 6, 7

HP 5500 2-port 10GbE Local Connect Mod — JD360B
- min=0 \ max=2 CX4 Cables

See Configuration Note:4, 6, 7

HP 5500 1-port 10GbE XFP Module — JD361B
- min=0 \ max=2 SFP+ Transceivers

See Configuration Note:2, 6, 7

HP 5500/5120 2-port 10GbE SFP+ Module — JD368B
- min=0 \ max=2 SFP+ Transceivers

See Configuration Note:1, 6, 7

HP 5500/4800 2-port GbE SFP Module — JD367A
- min=0 \ max=2 SFP Transceivers

See Configuration Note:3, 6, 7

HP 5500 8-port Gig-T Module — JG313A
No Transceivers

See Configuration Note:5, 6, 7

HP 5500 8-port SFP Module — JG314A
- min=0 \ max=8 SFP Transceivers

See Configuration Note:3, 5, 6, 7

HP 5500/5120 2p 10GBASE-T Module — JG535A
- No Transceivers

See Configuration Note:6, 7

Configuration Rules:

Note 1 The following Transceivers install into this Module:

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C

Configuration

	HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
Note 2	The following Transceivers install into this Module:	
	HP X135 10G XFP LC ER Transceiver	JD121A
	HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B
	HP X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
Note 3	The following Transceivers install into this Module:	
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
Note 4	The following Cables install into this Module: (Use #B01 if switch is CTO)	
	HP X230 Local Connect 50cm CX4 Cable	JD363B
	HP X230 Local Connect 100cm CX4 Cable	JD364B
	HP X230 CX4 to CX4 3m Cable	JD365A

Note 5 If this module is installed in the JG311A, JG543A, or JG541A, or JG680A Then the max = 1. Installs in Slot 1.

Note 6 If factory intergrated into the switch, This Module must be ordered as #0D1 when the switch is not Factory Racked.

Note 7 If factory intergrated into the switch, This Module must be ordered as #B01 when the switch is Factory Racked (Rack Level Integration CTO).

Transceivers

SFP Transceivers

Configuration

HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X125 1G SFP LC LH40 1310nm XCVR	JD061A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X110 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC BX 10-D Transceiver	JD101A
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
SFP+ Transceivers	
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X130 SFP+ LC SR Transceiver	JD092B
HP X130 SFP+ LC LRM Transceiver	JD093B
HP X130 SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ SFP+ 0.65m DAC Cable	JD095C
HP X240 10G SFP+ SFP+ 1.2m DAC Cable	JD096C
HP X240 10G SFP+ SFP+ 3m DAC Cable	JD097C
HP X240 10G SFP+ SFP+ 5m DAC Cable	JG081C
HP X240 10G SFP+ 7m DAC Cable	JC784C

Configuration

XFP Transceivers

HP X130 10G XFP LC ZR 1550nm Transceiver	JD107A
HP X130 10G XFP LC LR 1310nm Transceiver	JD108B
HP X130 LC SR XFP Transceiver	JD117B
HP X135 10G XFP LC ER Transceiver	JD121A

Cables

Local Connect Cables

HP X230 Local Connect 50cm CX4 Cable	JD363B
HP X230 Local Connect 100 cm CX4 Cable	JD364B
HP X230 CX4 to CX4 3m Cable	JD365A

Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A
HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A
HP 5 m Multimode OM3 LC/LC FC Cable	AJ836A
HP 15 m Multimode OM3 LC/LC FC Cable	AJ837A
HP 30 m Multimode OM3 LC/LC FC Cable	AJ838A
HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A
HP Premier Flex LC/LC OM4 2f 1m Cbl	QK732A
HP Premier Flex LC/LC OM4 2f 2m Cbl	QK733A
HP Premier Flex LC/LC OM4 2f 5m Cbl	QK734A
HP Premier Flex LC/LC OM4 2f 15m Cbl	QK735A
HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A

Switch Enclosure Options

Configuration

Opacity Shield Kit

System (std 0 // max 1) User Selection (min 0 // max 1)

HP 5500-24G-4SFP HI 2Slts Opcty Shld Kit — JG716A
- Supported on JG681A

See Configuration Note:1

HP 5500-24G-PoE+-4SFP HI Opcty Shld Kit — JG891A
- Supported on JG679A, JG680A

See Configuration Note:1

Configuration Rules:

Note 1 If selected with a CTO Switch Solution, Quantity 1 of JG585A#B01 must also be ordered.

Tamper Evidence Labels

System (std 0 // max 1) User Selection (min 0 // max 1)

HP 12mm x 60mm Tmpr-Evidence (30) Lbl — JG585A
- Supported on JG716A or JG891A

See Configuration Note:1

Configuration Rules:

Note 1 If selected with a CTO Switch Solution, Quantity 1 of JG719A#B01 or JG891A#B01 must also be ordered.

Remarks Each JG716A or JG891A would use 1 of JG585A.

Technical Specifications

HP 5500-24G-4SFP HI Switch with 2 interface Slots (JG311A)

I/O ports and slots	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	4 fixed Gigabit Ethernet SFP ports	
	2 SFP+ 10GbE ports	
	2 port expansion module slots	
	Supports a maximum of 38 autosensing 100/1000 ports, with optional module	
Additional ports and slots	1 RJ-45 serial console port	
	1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Physical characteristics	**Dimensions**	17.32(w) x 14.17(d) x 1.72(h) in (44.00 x 36.00 x 4.37 cm) (1U height)
	Weight	16.53 lb (7.5 kg), Fully loaded
Memory and processor	1 GB SDRAM, 512 MB flash; packet buffer size: 3 MB	
Mounting and enclosure	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)	
Performance	**1000 Mb Latency**	< 5 µs
	10 Gbps Latency	< 3 µs
	Throughput	130.9 Mpps
	Routing/Switching capacity	176 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	32000 entries
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 47.9 dB, High-speed fan: 51.1 dB; ISO 7779
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	481 BTU/hr (507.46 kJ/hr)
	AC voltage	100 - 240 VAC
	DC voltage	-48 to -60 VDC
	Maximum power rating	141 W
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS Compliance; AS/NZS 60950-1; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; ICES-003 Class A; CISPR 24; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; GB9254; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15	

Technical Specifications

	(CFR 47) CLASS A; YD/T993
Notes	8-port Gig-T and SFP modules (JG313A and JG314A) are supported only in slot 1 of this switch.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4G43E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4G44E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates(U4G55E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV876E) Installation with minimum configuration, system-based pricing (UW451E) 4-year, 4-hour onsite, 13x5 coverage for hardware (U4G50E) 4-year, 4-hour onsite, 24x7 coverage for hardware (U4G53E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G59E) 4-year, 24x7 SW phone support, software updates (U4G57E) 5-year, 4-hour onsite, 13x5 coverage for hardware (U4G46E)]5-year, 4-hour onsite, 24x7 coverage for hardware (U4G47E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G60E) 5-year, 24x7 SW phone support, software updates (U4G58E) 3 Yr 6 hr Call-to-Repair Onsite (U4G45E) 4 Yr 6 hr Call-to-Repair Onsite (U4G54E) 5 Yr 6 hr Call-to-Repair Onsite (U4G48E) 1-year, 4-hour onsite, 13x5 coverage for hardware (U4G49E) 1-year, 4-hour onsite, 24x7 coverage for hardware (U4G51E) 1-year, 6 hour Call-To-Repair Onsite for hardware (U4G52E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (U4G70E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G61E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U4G62E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G63E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G66E) 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G64E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G67E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G65E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G68E) 3 Yr NBD Onsite Proactive Care (U4G71E) 4 Yr NBD Onsite Proactive Care (U4G72E) 5 Yr NBD Onsite Proactive Care (U4G73E) 3 Yr 4hr/24x7 Proactive Care (U4G74E) 4 Yr 4hr/24x7 Proactive Care (U4G75E) 5 Yr 4hr/24x7 Proactive Care (U4G76E) 3 Yr 6hr CTR Proactive Care (U4G77E) 4 Yr 6hr CTR Proactive Care (U4G78E) 5 Yr 6hrCTR Proactive Care (U4G79E) Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 5500-48G-4SFP HI Switch with 2 interface Slots (JG312A)

I/O ports and slots	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

Technical Specifications

	4 fixed Gigabit Ethernet SFP ports	
	2 SFP+ 10GbE ports	
	2 port expansion module slots	
	Supports a maximum of 70 autosensing 100/1000 ports, with optional module	
Additional ports and slots	1 RJ-45 serial console port 1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Physical characteristics	**Dimensions**	17.32(w) x 16.54(d) x 1.72(h) in (44.0 x 42.0 x 4.37 cm) (1U height)
	Weight	18.74 lb (8.5 kg)
Memory and processor	1 GB SDRAM, 512 MB flash; packet buffer size: 6 MB	
Mounting and enclosure	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)	
Performance	**1000 Mb Latency**	< 5 µs
	10 Gbps Latency	< 3 µs
	Throughput	166.6 Mpps
	Routing/Switching capacity	224 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	32000 entries
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 48.6 dB, High-speed fan: 57.6 dB; ISO 7779
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	651 BTU/hr (686.81 kJ/hr)
	AC voltage	100 - 240 VAC
	DC voltage	-48 to -60 VDC
	Maximum power rating	191 W
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS Compliance; AS/NZS 60950-1; GB 4943	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4H17E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4H18E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U4H29E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (U4H23E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (U4H25E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U4H44E)	

4-year, 4-hour onsite, 13x5 coverage for hardware (U4H24E)
4-year, 4-hour onsite, 24x7 coverage for hardware (U4H27E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4H33E)
4-year, 24x7 SW phone support, software updates (U4H31E)
5-year, 4-hour onsite, 13x5 coverage for hardware (U4H20E)
5-year, 4-hour onsite, 24x7 coverage for hardware (U4H21E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4H34E)
5-year, 24x7 SW phone support, software updates (U4H32E)
3 Yr 6 hr Call-to-Repair Onsite (U4H19E)
4 Yr 6 hr Call-to-Repair Onsite (U4H28E)
5 Yr 6 hr Call-to-Repair Onsite (U4H22E)
1-year, 6 hour Call-To-Repair Onsite for hardware (U4H26E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H35E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U4H36E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H37E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H40E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H38E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H41E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H39E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H42E)
3 Yr NBD Onsite Proactive Care (U4H45E)
4 Yr NBD Onsite Proactive Care (U4H46E)
5 Yr NBD Onsite Proactive Care (U4H47E)
3 Yr 4hr/24x7 Proactive Care (U4H48E)
4 Yr 4hr/24x7 Proactive Care (U4H49E)
5 Yr 4hr/24x7 Proactive Care (U4H50E)
3 Yr 6hr CTR Proactive Care (U4H51E)
4 Yr 6hr CTR Proactive Care (U4H52E)
5 Yr 6hrCTR Proactive Care (U4H53E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 5500-24G-PoE+-4SFP HI Switch with 2 Interface Slots (JG541A)

I/O ports and slots	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	4 fixed Gigabit Ethernet SFP ports	
	2 SFP+ 10GbE ports	
	2 port expansion module slots	
	Supports a maximum of 38 autosensing 100/1000 ports, with optional module	
Additional ports and slots	1 RJ-45 serial console port	
	1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Physical characteristics	**Dimensions**	17.32(w) x 18.11(d) x 1.72(h) in (43.99 x 46 x 4.37 cm) (1U height)
	Weight	22.05 lb (10 kg) shipping weight

Technical Specifications

Memory and processor	1 GB SDRAM, 512 MB flash; packet buffer size: 3 MB	
Mounting and enclosure	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (hardware included)	
Performance	**1000 Mb Latency**	< 5 µs
	10 Gbps Latency	< 3 µs
	Throughput	130.9 Mpps
	Routing/Switching capacity	176 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	32000 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 41.0 dB, High-speed fan: 64.0 dB; ISO 7779
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	460 BTU/hr (485.3 kJ/hr)
	AC voltage	100 - 240 VAC
	DC voltage	-48 to -60 VDC
	Maximum power rating	150 W
	PoE power	740 W PoE+
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the maximum power available from the required power supply or supplies. Device supports 1 or 2 internal modular power supplies. JG544A will supply up to 435 watts of PoE+ power per installed unit. JG545A will supply up to 800 watts of PoE+ power per installed unit to the extent needed by the installation.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS Compliance; AS/NZS 60950-1; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; ICES-003 Class A; CISPR 24; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; GB9254; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A; YD/T993	
Notes	8-port Gig-T and SFP modules (JG313A and JG314A) are supported only in slot 1 of this switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4G43E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4G44E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U4G55E) 4-year, 4-hour onsite, 13x5 coverage for hardware (U4G50E) 4-year, 4-hour onsite, 24x7 coverage for hardware (U4G53E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G59E) 4-year, 24x7 SW phone support, software updates (U4G57E) 5-year, 4-hour onsite, 13x5 coverage for hardware (U4G46E) 5-year, 4-hour onsite, 24x7 coverage for hardware (U4G47E)	

5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G60E)
5-year, 24x7 SW phone support, software updates (U4G58E)
3 Yr 6 hr Call-to-Repair Onsite (U4G45E)
4 Yr 6 hr Call-to-Repair Onsite (U4G54E)
5 Yr 6 hr Call-to-Repair Onsite (U4G48E)
1-year, 4-hour onsite, 13x5 coverage for hardware (U4G49E)
1-year, 4-hour onsite, 24x7 coverage for hardware (U4G51E)
1-year, 6 hour Call-To-Repair Onsite for hardware (U4G52E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (U4G70E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G61E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U4G62E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G63E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G66E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G64E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G67E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G65E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G68E)
3 Yr NBD Onsite Proactive Care (U4G71E)
4 Yr NBD Onsite Proactive Care (U4G72E)
5 Yr NBD Onsite Proactive Care (U4G73E)
3 Yr 4hr/24x7 Proactive Care (U4G74E)
4 Yr 4hr/24x7 Proactive Care (U4G75E)
5 Yr 4hr/24x7 Proactive Care (U4G76E)
3 Yr 6hr CTR Proactive Care (U4G77E)
4 Yr 6hr CTR Proactive Care (U4G78E)
5 Yr 6hrCTR Proactive Care (U4G79E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 5500-48G-PoE+-4SFP HI Switch with 2 Interface Slots (JG542A)

I/O ports and slots	48 RJ-45 autosensing 10/100/1000 PoE+ ports; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	4 fixed Gigabit Ethernet SFP ports	
	2 SFP+ 10GbE ports	
	2 port expansion module slots	
	Supports a maximum of 70 autosensing 100/1000 ports, with optional module	
Additional ports and slots	1 RJ-45 serial console port	
	1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Physical characteristics	**Dimensions**	17.32(w) x 18.11(d) x 1.72(h) in (43.99 x 46 x 4.37 cm) (1U height)
	Weight	23.15 lb (10.5 kg)
Memory and processor	1 GB SDRAM, 512 MB flash; packet buffer size: 6 MB	
Mounting and enclosure	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (hardware included)	

Technical Specifications

Performance	**1000 Mb Latency**	< 5 µs
	10 Gbps Latency	< 3 µs
	Throughput	166.6 Mpps
	Routing/Switching capacity	224 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	32000 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 43.1 dB, High-speed fan: 66.1 dB; ISO 7779
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	666 BTU/hr (702.63 kJ/hr)
	AC voltage	100 - 240 VAC
	DC voltage	-48 to -60 VDC
	Maximum power rating	195 W
	PoE power	1440 W PoE+
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies. Device supports 1 or 2 internal modular power supplies. JG544A will supply 435 watts of PoE+ power per installed unit. JG545A will supply up to 800 watts of PoE+ power per installed unit.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS Compliance; AS/NZS 60950-1; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; ICES-003 Class A; CISPR 24; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; GB9254; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A; YD/T993	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4H17E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4H18E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U4H29E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (U4H23E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (U4H25E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U4H44E) 4-year, 4-hour onsite, 13x5 coverage for hardware (U4H24E) 4-year, 4-hour onsite, 24x7 coverage for hardware (U4H27E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4H33E) 4-year, 24x7 SW phone support, software updates (U4H31E) 5-year, 4-hour onsite, 13x5 coverage for hardware (U4H20E)	

Technical Specifications

5-year, 4-hour onsite, 24x7 coverage for hardware (U4H21E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4H34E)
5-year, 24x7 SW phone support, software updates (U4H32E)
3 Yr 6 hr Call-to-Repair Onsite (U4H19E)
4 Yr 6 hr Call-to-Repair Onsite (U4H28E)
5 Yr 6 hr Call-to-Repair Onsite (U4H22E)
1-year, 6 hour Call-To-Repair Onsite for hardware (U4H26E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H35E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U4H36E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H37E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H40E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H38E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H41E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4H39E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4H42E)
3 Yr NBD Onsite Proactive Care (U4H45E)
4 Yr NBD Onsite Proactive Care (U4H46E)
5 Yr NBD Onsite Proactive Care (U4H47E)
3 Yr 4hr/24x7 Proactive Care (U4H48E)
4 Yr 4hr/24x7 Proactive Care (U4H49E)
5 Yr 4hr/24x7 Proactive Care (U4H50E)
3 Yr 6hr CTR Proactive Care (U4H51E)
4 Yr 6hr CTR Proactive Care (U4H52E)
5 Yr 6hrCTR Proactive Care (U4H53E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 5500-24G-SFP HI Switch with 2 Interface Slots (JG543A)

Ports	24 fixed Gigabit Ethernet SFP ports	
	4 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	2 SFP+ 10GbE ports	
	2 port expansion module slots	
	Supports a maximum of 12 autosensing 10/100/1000 ports, with optional module	
Additional ports and slots	1 RJ-45 serial console port	
	1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Physical characteristics	**Dimensions**	17.32(w) x 14.17(d) x 1.72(h) in (43.99 x 35.99 x 4.37 cm) (1U height)
	Weight	16.53 lb (7.5 kg)
Memory and processor	1 GB SDRAM, 512 MB flash; packet buffer size: 3 MB	
Mounting and enclosure	Mounts in an EIA-Standard 19-inch telco rack or equipment cabinet (hardware included)	
Performance	**1000 Mb Latency**	< 5 µs
	10 Gbps Latency	< 3 µs
	Throughput	130.9 Mpps

Technical Specifications

	Routing/Switching capacity	176 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	32000 entries
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 48.3 dB, High-speed fan: 54.0 dB; ISO 7779
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	460 BTU/hr (485.3 kJ/hr)
	AC voltage	100 - 240 VAC
	DC voltage	-48 to -60 VDC
	Maximum power rating	135 W
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS Compliance; AS/NZS 60950-1; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; ICES-003 Class A; CISPR 24; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; GB9254; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A; YD/T993	
Notes	8-port Gig-T and SFP modules (JG313A and JG314A) are supported only in slot 1 of this switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4G43E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4G44E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U4G55E) 4-year, 4-hour onsite, 13x5 coverage for hardware (U4G50E) 4-year, 4-hour onsite, 24x7 coverage for hardware (U4G53E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G59E) 4-year, 24x7 SW phone support, software updates (U4G57E) 5-year, 4-hour onsite, 13x5 coverage for hardware (U4G46E) 5-year, 4-hour onsite, 24x7 coverage for hardware (U4G47E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (U4G60E) 5-year, 24x7 SW phone support, software updates (U4G58E) 3 Yr 6 hr Call-to-Repair Onsite (U4G45E) 4 Yr 6 hr Call-to-Repair Onsite (U4G54E) 5 Yr 6 hr Call-to-Repair Onsite (U4G48E) 1-year, 4-hour onsite, 13x5 coverage for hardware (U4G49E) 1-year, 4-hour onsite, 24x7 coverage for hardware (U4G51E) 1-year, 6 hour Call-To-Repair Onsite for hardware (U4G52E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (U4G70E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange	

(U4G61E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (U4G62E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G63E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G66E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G64E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (U4G67E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G65E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (U4G68E)
3 Yr NBD Onsite Proactive Care (U4G71E)
4 Yr NBD Onsite Proactive Care (U4G72E)
5 Yr NBD Onsite Proactive Care (U4G73E)
3 Yr 4hr/24x7 Proactive Care (U4G74E)
4 Yr 4hr/24x7 Proactive Care (U4G75E)
5 Yr 4hr/24x7 Proactive Care (U4G76E)
3 Yr 6hr CTR Proactive Care (U4G77E)
4 Yr 6hr CTR Proactive Care (U4G78E)
5 Yr 6hrCTR Proactive Care (U4G79E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Standards and protocols
(applies to all products in series)

BGP
RFC 1657 Definitions of Managed Objects for BGPv4
RFC 1771 BGPv4
RFC 2385 BGP Session Protection via TCP MD5
RFC 2858 BGP-4 Multi-Protocol Extensions

Device management
RFC 1157 SNMPv1/v2c
RFC 1305 NTPv3
RFC 1901 (Community based SNMPv2)
RFC 2452 MIB for TCP6
RFC 2454 MIB for UDP6
RFC 2573 (SNMPv3 Applications)
RFC 2576 (Coexistence between SNMP V1, V2, V3)
RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

General protocols
IEEE 802.1ad Q-in-Q

IPv6
RFC 1881 IPv6 Address Allocation Management
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2080 RIPng for IPv6
RFC 2373 IPv6 Addressing Architecture
RFC 2375 IPv6 Multicast Address Assignments
RFC 2460 IPv6 Specification
RFC 2461 IPv6 Neighbor Discovery
RFC 2462 IPv6 Stateless Address Auto-configuration
RFC 2463 ICMPv6
RFC 2464 Transmission of IPv6 over Ethernet Networks
RFC 2473 Generic Packet Tunneling in IPv6
RFC 2475 IPv6 DiffServ Architecture
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2740 OSPFv3 for IPv6
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 3162 RADIUS and IPv6
RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
RFC 3307 IPv6 Multicast Address Allocation
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3542 Advanced Sockets API for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extension for IPv6

Technical Specifications

IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q (GVRP)
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation (LAG)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3af Power over Ethernet
IEEE 802.3at PoE+
IEEE 802.3az Energy Efficient Ethernet
IEEE 802.3i 10BASE-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 854 TELNET
RFC 925 Multi-LAN Address Resolution
RFC 950 Internet Standard Subnetting Procedure
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1305 NTPv3
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 1887 An Architecture for IPv6 Unicast Address Allocation
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2338 VRRP
RFC 2375 IPv6 Multicast Address Assignments
RFC 2616 Hypertext Transfer Protocol -- HTTP/1.1
RFC 2644 Directed Broadcast Control
RFC 2784 Generic Routing Encapsulation (GRE)
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting
RFC 3209 RSVP-TE Extensions to RSVP for LSP Tunnels
RFC 3246 Expedited Forwarding PHB
RFC 3410 Applicability Statements for SNMP
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3810 MLDv2 for IPv6
RFC 4113 MIB for UDP
RFC 4443 ICMPv6
RFC 4541 IGMP & MLD Snooping Switch

MIBs
RFC 1212 Concise MIB Definitions
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1657 BGP-4 MIB
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 1850 OSPFv2 MIB
RFC 2011 SNMPv2 MIB for IP
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2096 IP Forwarding Table MIB
RFC 2233 Interface MIB
RFC 2452 IPV6-TCP-MIB
RFC 2454 IPV6-UDP-MIB
RFC 2465 IPv6 MIB
RFC 2466 ICMPv6 MIB
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions
RFC 2737 Entity MIB (Version 2)
RFC 2787 VRRP MIB
RFC 2819 RMON MIB
RFC 2863 The Interfaces Group MIB
RFC 2925 Ping MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB
RFC 3621 Power Ethernet MIB
RFC 4113 UDP MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
IEEE 802.1D (STP)
RFC 1157 SNMPv1
RFC 1212 Concise MIB definitions
RFC 1215 Convention for defining traps for use with the SNMP
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1918 Private Internet Address Allocation
RFC 2373 Remote Network Monitoring Management Information Base for High Capacity Networks
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple

Technical Specifications

RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extensions to Support IP Version 6
RFC 3623 Graceful OSPF Restart
RFC 3704 Unicast Reverse Path Forwarding (URPF)
RFC 3768 Virtual Router Redundancy Protocol (VRRP)
RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
RFC 4090 Fast Reroute Extensions to RSVP-TE for LSP Tunnels
RFC 4113 Management Information Base for the User Datagram Protocol (UDP)
RFC 4213 Basic IPv6 Transition Mechanisms
RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

IP multicast
RFC 2236 IGMPv2
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2858 Multiprotocol Extensions for BGP-4
RFC 3376 IGMPv3
RFC 3569 An Overview of Source-Specific Multicast (SSM)
RFC 3618 Multicast Source Discovery Protocol (MSDP)
RFC 3973 PIM Dense Mode
RFC 4601 PIM Sparse Mode

Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2576 Coexistence between SNMP versions
RFC 2578 SMIv2
RFC 2581 TCP6
RFC 2819 Remote Network Monitoring Management Information Base
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
RFC 3176 sFlow
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 3413 Simple Network Management Protocol (SNMP) Applications
RFC 3414 SNMPv3 User-based Security Model (USM)
RFC 3415 SNMPv3 View-based Access Control Model VACM)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

OSPF
RFC 1587 OSPF NSSA
RFC 1850 OSPFv2 Management Information Base (MIB), traps
RFC 2328 OSPFv2
RFC 2370 OSPF Opaque LSA Option

QoS/CoS
IEEE 802.1P (CoS)
RFC 2474 DSCP DiffServ
RFC 2475 DiffServ Architecture
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)
RFC 2697 A Single Rate Three Color Marker
RFC 2698 A Two Rate Three Color Marker
RFC 4594 Configuration Guidelines for DiffServ Service Classes

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 1918 Address Allocation for Private Internets
RFC 2865 RADIUS Authentication
RFC 2866 RADIUS Accounting
RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
Access Control Lists (ACLs)
MAC Authentication
Port Security
SSHv2 Secure Shell

HP 5500 HI Switch Series accessories

Modules

HP 5500 2-port 10GbE XFP Module	JD359B
HP 5500 2-port 10GbE Local Connect Module	JD360B
HP 5500 1-port 10GbE XFP Module	JD361B
HP 5500/4800 2-port GbE SFP Module	JD367A
HP 5500/5120 2-port 10GbE SFP+ Module	JD368B
HP 5500 8-port Gig-T Module	JG313A
HP 5500 8-port SFP Module	JG314A
NEW HP 5500/5120 2-port 10GBASE-T Module	JG535A

Transceivers

HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X110 100M SFP LC LX Transceiver	JD120B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
HP X130 10G XFP LC SR Transceiver	JD117B
HP X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
HP X135 10G XFP LC ER Transceiver	JD121A
HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

Cables

HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A

Accessories

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
HP X230 Local Connect 50cm CX4 Cable	JD363B
HP X230 Local Connect 100cm CX4 Cable	JD364B
HP X230 CX4 to CX4 3m Cable	JD365A
HP 5500-24G-4SFP HI Switch with 2 Interface Slots (JG311A)	
HP 5500 150WAC Power Supply	JD362A
HP 5500 150WDC Power Supply	JD366A
HP 5500-48G-4SFP HI Switch with 2 Interface Slots (JG312A)	
HP 5500 150WAC Power Supply	JD362A
HP 5500 150WDC Power Supply	JD366A
HP 5500-24G-PoE+-4SFP HI Switch with 2 Interface Slots (JG541A)	
HP X362 720W 100-240VAC to 56VDC PoE Power Supply	JG544A
HP X362 1110W 115-240VAC to 56VDC PoE Power Supply	JG545A
HP 5500-48G-PoE+-4SFP HI Switch with 2 Interface Slots (JG542A)	
HP X362 720W 100-240VAC to 56VDC PoE Power Supply	JG544A
HP X362 1110W 115-240VAC to 56VDC PoE Power Supply	JG545A
HP 5500-24G-SFP HI Switch with 2 Interface Slots (JG543A)	
HP 5500 150WAC Power Supply	JD362A
HP 5500 150WDC Power Supply	JD366A

Summary of Changes

Date	Version History	Action	Description of Change:
December 1, 2014	From Version 23 to 24	Changed	Warranty and support updated
August 18, 2014	From Version 22 to 23	Changed	Technical Specifications updated, Transceivers updated
July 3, 2014	From Version 21 to 22	Changed	Configuration menu updated.
June 10, 2014	From Version 20 to 21	Added	Added Switch Enclosure Options to Configuration.
April 15, 2014	From Version 19 to 20	Changed	Notes section for Modules was revised in Configuration.
March 19, 2014	From Version 18 to 19	Changed	Transceivers were revised in Configuration.
January 16, 2014	From Version 17 to 18	Changed	Key features, Product overview, and Features and benefits were revised.
December 17, 2013	From Version 16 to 17	Changed	Modules was revised in Configuration.
December 9, 2013	From Version 15 to 16	Changed	Notes for Modules was revised in Configuration.
November 12, 2013	From Version 14 to 15	Changed	Box Level Integration CTO Models, Rack Level Integration CTO Models, Internal Power Supplies, Modules, and Cables were revised in Configuration.
September 30, 2013	From Version 13 to 14	Removed	HP X110 100M SFP LC FX Dual Mode Transceiver and HP X110 100M SFP LX LC Dual Mode Transceiver were removed from Configuration
September 27, 2013	From Version 11 to 13	Changed	Configuration was revised.
July 26, 2013	From Version 10 to 11	Changed	Changes made in the Features and benefits and Standards and protocols sections.
July 5, 2013	From Version 9 to 10	Changed	Changes made in the Configuration section.
June 27, 2013	From Version 8 to 9	Changed	Standards and protocols was revised
June 21, 2013	From Version 7 to 8	Changed	Layer 2 switching and Security were revised in Features and Benefits Standards and protocols was revised in Technical Specifications
June 10, 2013	From Version 6 to 7	Added	Models and Specifications: Several new models were added.
		Changed	Updates were made to Configuration, Features and Benefits, the specifications for each model, and the Accessories.
April 22, 2013	From Version 5 to 6	Added	Overview: Added images.
March 25, 2013	From Version 4 to 5	Added	Added the Configuration section.
July 6, 2012	From Version 3 to 4	Changed	Updates were made to Features and Benefits, the specifications for each model, and the Accessories.
March 30, 2012	From Version 2 to 3	Changed	Additions were made to the specifications for each model.
February 13, 2012	From Version 1 to 2	Changed	QuickSpecs were reposted for the proper announcement date.

Summary of Changes

To learn more, visit: www.hp.com/networking

© Copyright 2012-2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft is a U.S. registered trademark of the Microsoft group of companies.